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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/864,581	05/24/2001	David W. Beddome	90099012	2137
7590 12/12/2003 Felix L. Fischer Honeywell International Inc. Suite 200 23326 Hawthorne Boulevard Torrance, CA 90505			EXAMINER DUONG, THO V	
			ART UNIT 3743	PAPER NUMBER 17
DATE MAILED: 12/12/2003				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/864,581

Applicant(s)

BEDDOME ET AL.

Examiner

Tho v Duong

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 27-52 is/are pending in the application.
- 4a) Of the above claim(s) 29,33,38-40 and 49 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 52 is/are allowed.
- 6) ☒ Claim(s) 27,28,30-32,34,45-48, and 50 is/are rejected.
- 7) ☒ Claim(s) 35-37,41-44 and 51 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 May 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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DETAILED ACTION

Response to Arguments

Applicant's arguments with respect to claims 27-28,30-32,34,45-48 and 50 have been considered but are moot in view of the new ground(s) of rejection.

Specification

The abstract of the disclosure is objected to because the abstract has more than 150 words. Correction is required. See MPEP § 608.01(b).

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: the claimed subject matter of “ the first mount restrains the tube so to allow the transfer of torsional loads from the tube via the motion limiter to the load bearing member” in claim 46 was not described in the specification.

The disclosure is objected to because of the following informalities: on page 17, at lines 18 and 20, the reference number (192) has been inconsistently used to describe both a motion limiter and a mount.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

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The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 46 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The claimed subject matter of "the first mount" was not described in the specification in such a way as to enable one skill in the art to use the first mount to transfer of torsional loads from the tube via the motion limiter to the load bearing member. It appears in figure 5, that the motion limiter (192) moves only in up and down directions.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 27,28,30,31,32,34,45 and 46 are rejected under 35 U.S.C. 102(b) as being anticipated by Mather et al. (US 4,151,828). Mather discloses (figures 1-3 and column 5, lines 58-68) a heat exchanger comprising a core (22) having a heat exchange portion (inside of the

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core); a tube (21) has a longitudinal axis including a motion limiter (28) extending radially therefrom to limit upward or downward axial motion of the tube, wherein at least a portion of the tube extends into the core (22) and wherein the tube (21) is positioned at least adjacent to the heat exchange portion of the core; a load bearing member (29) positioned adjacent to the core (22); and a first mount positioned between the tube (21) and the load bearing member (29), so that the load bearing member can receive loads from the tube via the motion limiter (28) when the tube is expanded; the first mount comprises a channel defined by the load bearing member (29) and the core (22), wherein the motion limiter (28) is received by the channel such that the movement of the motion limiter is restrained by the channel and since the motion limiter is freely moving within the channel, the first mount is adjustable to expand separately from the load bearing member; the heat exchanger further comprising a manifold (33); and a second mount (23) positioned between the tube (21) and the core (22). See Figure A (page 6) for clarity of the anticipation. As regarding claims 27, 31 and 34, it has been held that the recitation an element is "capable of" performing a function is not positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense. In re Hutchison, 69 USPQ 138. In this instant application, Mathers' tube has ability to contact with the core to transfer load between the tube (21) and the core, to provide support to the core (22), to increase stiffness of the core; the second mount (23) has ability to transfer loads between the tube and the core and to restrain lateral movement of the tube; and the first mount has ability to restrain axial movement of the tube. As regarding functional recitations in 45-46, the first mount shown in reference Mather is structurally the same as the first mount as claimed. Therefore, the claimed function performing by the claimed first mount is inherently from the first mount of Mather. Furthermore,

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MPEP 2114 (R-1) states that while features of an apparatus may be recited either structurally or functionally, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function. In re Schreiber, 128 F.3d 1473, 1477-78, 44 USPQ2d 1429, 1431-32 (Fed. Cir. 1997). As regarding claim 30, it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitation. Ex parte Masham, 2 USPQ2d 1647 (1987). In this instant application, the intended use recitation of “for passing a fluid from and to the core” does not differentiate claimed manifold from Mather’s manifold (30) satisfying the claimed structural limitations.

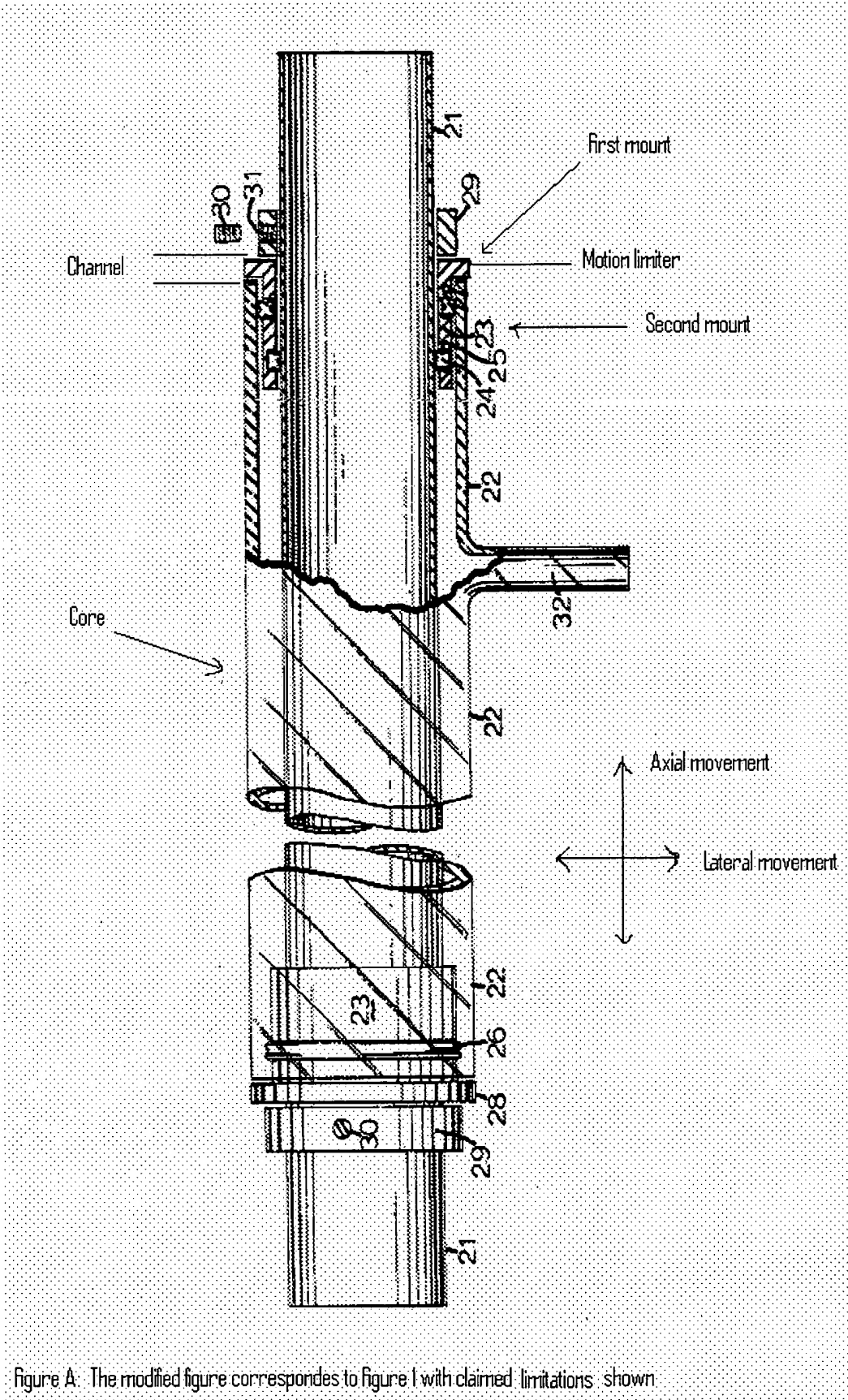
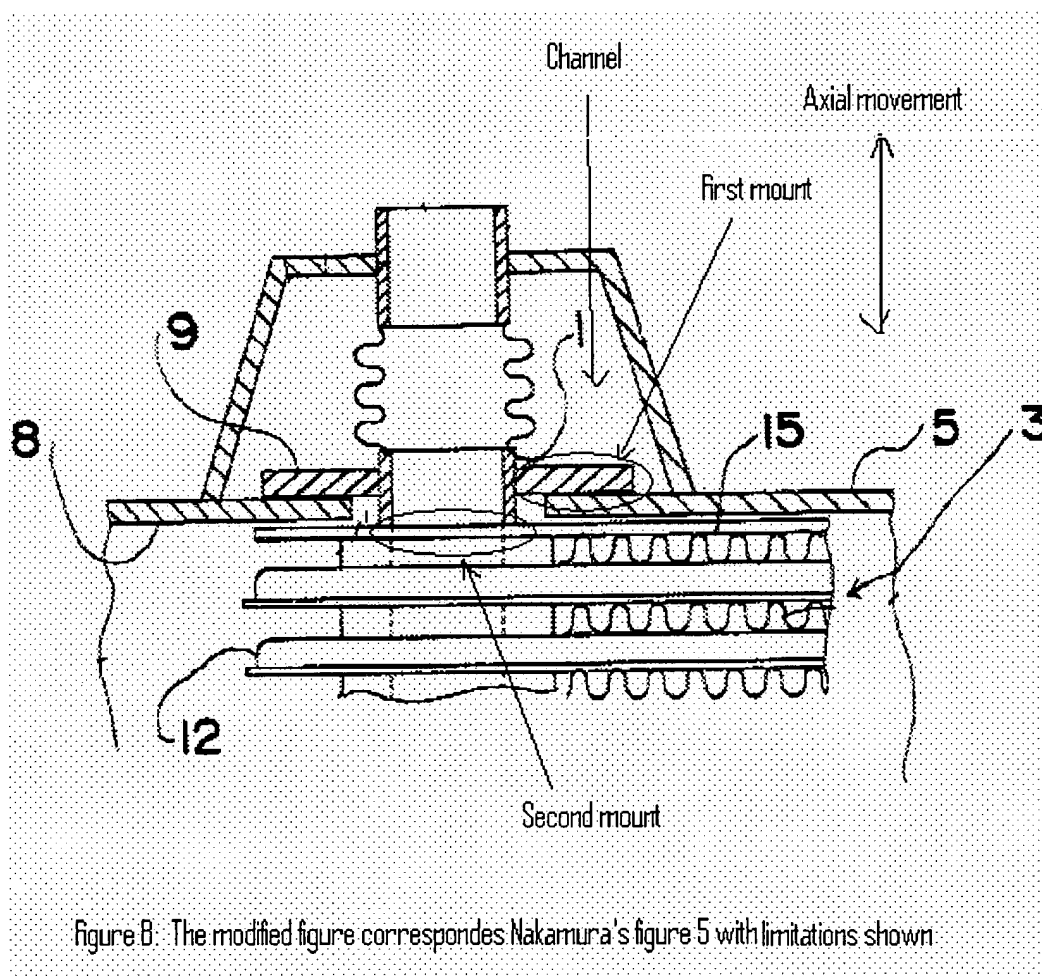


Figure A: The modified figure correspondes to figure 1 with claimed limitations shown

Claims 47,48 and 50 are rejected under 35 U.S.C. 102(e) as being anticipated by Nakamura et al. (US 6,283,199). Nakamura discloses (figure 5 and column 5, lines 47-62) a heat exchanger comprising a core (3) having a heat exchange portion, wherein the heat exchange portion comprises a layering of heat exchange members (12,15) capable of being displaced substantially laterally; a tube (1) having a length and including a motion limiter (9) extending radially therefrom to limit axial motion of the tube, wherein at least a portion of the tube extends adjacent to the heat exchanger member (12,15); a load bearing member (5) positioned adjacent the core (3). Nakamura further discloses (Figure B as bellow) that a first mount positioned between the tube (1) and the loading bearing member (5) so that the load bearing member (5) receives loads from the tube (1) via the motion limiter (9); the first mount comprises a channel having a lower end and an upper end defined by the load bearing member (5) and a sleeve portion (7) respectively wherein the motion limiter (9) is received by the channel such that the axial movement of the motion limiter is restrained by the channel; the heat exchanger further comprises a second mount positioned between the tube (1) and the core (3). As regarding claims 47 and 50, it has been held that the recitation an element is "capable of" performing a function is not positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense. In re Hutchison, 69 USPQ 138. In this instant application, Nakamura's tube (1) has ability to contact with the core (3) to transfer load between the tube (21) and the core, to provide support to the core (22), to increase stiffness of the core; and the second mount has ability to transfer loads between the tube and the core. Furthermore, regarding the functional recitations such as "to transfer loads between the tube...to increase the stiffness of the

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core”, MPEP 2114 (R-1) states that while features of an apparatus may be recited either structurally or functionally, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function. In re Schreiber, 128 F.3d 1473, 1477-78, 44 USPQ2d 1429, 1431-32 (Fed. Cir. 1997). Therefore, these functional recitations do not further patentably distinguish the claimed heat exchanger from Nakamura’s heat exchanger.



Allowable Subject Matter

Claim 52 is allowed.

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Claims 35-37, 41-44, and 51 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: the prior art either taken singularly or in combination fails to disclose at least a portion of the tube extends into the core having a layering heat exchange members with a motion limiter extending radially from the tube as in claim 41 and a mount positioned between the end of the tube and the core wherein the end of the tube is positioned with the core as in claim 52.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

La Haye et al. (US 4,134,449) discloses a bellows sealing arrangement that has a tube extending adjacent to a core of a heat exchanger.

Giammaruti et al. (US 5,653,284) discloses a heat pipe heat exchanger that has a ring extending from a tube.

Any inquiry concerning this communication or earlier communication from the examiner should be directed to Tho Duong whose telephone number is (703) 305-0768. The examiner can normally be reached on from 9:30-6 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Henry Bennet, can be reached on (703) 308-0101. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

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Any inquiry of a general nature or relating to status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0861.



TD

December 5, 2003



Tho Duong

Patent Examiner.